

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/NZ03/00205

<b>A. CLASSIFICATION OF SUBJECT MATTER</b>																						
Int. Cl. <sup>7</sup> : C12N 15/15, C07K 14/81, G01N 33/53																						
According to International Patent Classification (IPC) or to both national classification and IPC																						
<b>B. FIELDS SEARCHED</b>																						
Minimum documentation searched (classification system followed by classification symbols) <b>SEE ELECTRONIC DATABASE BOX BELOW</b>																						
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched <b>SEE ELECTRONIC DATABASE BOX BELOW</b>																						
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) WPIDS, CAPLUS, MEDLINE, BIOSIS: keywords: Aspin, aspartyl protease inhibitor, allergy, immune, infection, diagnosis. DGENE, PIR, SWISS-PROT, GENBANK: SEQ ID NOs: 1, 3, 5, 7.																						
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>																						
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.																				
T	Shaw R J <i>et al.</i> (2003) Int. J. Parasitol. 33: 1233-1243. "Identification and characterisation of an aspartyl protease inhibitor homologue as a major allergen of <i>Trichostrongylus colubriformis</i> ." See whole document.	1-6, 8, 9, 11-22																				
P, X	De Maere V <i>et al.</i> (2002) Parasitology 125: 383-391. "Identification of potential protective antigens of <i>Ostertagia ostertagi</i> with local antibody probes." & EMBL database accession number CAD10783. See whole document.	1-6, 8, 9, 11-22																				
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex																						
<p>* Special categories of cited documents:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%; vertical-align: top;">"A"</td> <td style="width: 15%; vertical-align: top;">document defining the general state of the art which is not considered to be of particular relevance</td> <td style="width: 15%; vertical-align: top;">"T"</td> <td style="width: 55%; vertical-align: top;">later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</td> </tr> <tr> <td>"E"</td> <td>earlier application or patent but published on or after the international filing date</td> <td>"X"</td> <td>document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</td> </tr> <tr> <td>"L"</td> <td>document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</td> <td>"Y"</td> <td>document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</td> </tr> <tr> <td>"O"</td> <td>document referring to an oral disclosure, use, exhibition or other means</td> <td>"&amp;"</td> <td>document member of the same patent family</td> </tr> <tr> <td>"P"</td> <td>document published prior to the international filing date but later than the priority date claimed</td> <td></td> <td></td> </tr> </table>			"A"	document defining the general state of the art which is not considered to be of particular relevance	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	"E"	earlier application or patent but published on or after the international filing date	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	"O"	document referring to an oral disclosure, use, exhibition or other means	"&"	document member of the same patent family	"P"	document published prior to the international filing date but later than the priority date claimed		
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"P"	document published prior to the international filing date but later than the priority date claimed																					
Date of the actual completion of the international search 26 November 2003		Date of mailing of the international search report - <b>3 DEC 2003</b>																				
Name and mailing address of the ISA/AU <b>AUSTRALIAN PATENT OFFICE</b> PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6285 3929		Authorized officer <b>JANE MCHENRY</b> Telephone No : (02) 6283 2091																				

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages <i>(Remove spaces when completed if the page is too long)</i>	Relevant to claim No.
X	WO 98/12563, A (HESKA CORPORATION) 26 March 1998. See whole document.	1-6, 8, 9, 11-22
X	WO 96/32641, A (NEW ENGLAND BIOLABS, INC) 17 October 1996. See whole document.	1-6, 8, 9, 11-22
X	Frank G R <i>et al.</i> (1998) J. Parasitol. 84(6): 1231-1236. "Antibody to the <i>Dirofilaria immitis</i> aspartyl protease inhibitor homologue is a diagnostic marker for feline heartworm infections." See whole document.	1-6, 8, 9, 11-22
X	Duffy M S <i>et al.</i> (2002) Clin. Diagn. Lab. Immunol. 9(4): 763-770. "An Aspartyl protease inhibitor orthologue expressed by <i>Parelaphostrongylus tenuis</i> is immunogenic in an atypical host." & EMBL database accession number AAG50205. 30 July 2002. See whole document.	1-6, 8, 9, 11-22
X	EMBL database accession number AAA70419. 25 July 1995. Wisnewski N <i>et al.</i> "Aspartyl protease inhibitor homolog". See whole document.	1-4 and 15-22

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## Box I Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos :  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos : 7 and 10 (completely) and 14 (in part)  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:  
See supplementary box below.
  
3.  Claims Nos :  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a)

## Box II Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- The additional search fees were accompanied by the applicant's protest.  
 No protest accompanied the payment of additional search fees.

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## Supplemental Box

(To be used when the space in any of Boxes I to VIII is not sufficient)

### Continuation of Box No: I

Claims 7 and 10 are unduly broad and speculative. These claims refer to a ligand which binds to a polypeptide of the invention or a probe for the ligand. A meaningful and economically feasible search could not encompass the complete subject matter of the claims. It is not clear to a skilled addressee what is encompassed within the scope of the term "ligand ". Therefore these claims have not been searched.

Claim 14 has not been fully searched. This claim refers to a method for selectively breeding animals resistant to nematode infection. The claim does not define all the technical features of the invention in so far as the claim is not limited to the use of the Aspin polypeptides or nucleic acids of the invention. Therefore the claim has only been searched with respect to the method using the polypeptides or nucleic acids of the invention.

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

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This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member					
(To put a line under the citations tab to the first point on the next row and press F8)							
WO	9632641	EP	0820590 A4	JP	11503609 T	US	6103484 A
		EP	0820590 A1	WO	9632641 A1		
WO	9812563	AU	43537/97 A	EP	0934529 A1	JP	2001502896 T
		US	6391569 B1	US	2003170749 A1	WO	9812563 A1
END OF ANNEX							

(To add more lines press TAB at end of last row, remove paragraph marker to join up 'END OF ANNEX' box)